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Jun 26, 2001

US-PAT-NO: 6252405

DOCUMENT-IDENTIFIER: US 6252405 B1

TITLE: Temperature compensated NMR magnet and method of operation therefor

DATE-ISSUED: June 26, 2001

INVENTOR-INFORMATION:

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NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
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APPL-NO: 09/ 440813 [PALM]

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US-CL-ISSUED: 324/319; 324/320, 324/315

US-CL-CURRENT: 324/319; 324/315, 324/320

FIELD-OF-SEARCH: 324/319, 324/320, 324/321, 324/318, 324/300, 324/314, 324/307, 324/309, 324/315

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>3714553</u>	January 1973	Keller	324/318
<input type="checkbox"/>	<u>4870380</u>	September 1989	McGinley	335/296
<input type="checkbox"/>	<u>4943774</u>	July 1990	Breneman et al.	324/318
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<input type="checkbox"/>	<u>5774034</u>	June 1998	Yoneda et al.	335/301
<input type="checkbox"/>	<u>6037775</u>	March 2000	Shenoy et al.	324/320

ART-UNIT: 282

PRIMARY-EXAMINER: Arana; Louis

ABSTRACT:

An MRI system includes a magnet which produces the main polarizing magnetic field. Variations in strength of this field are corrected by a temperature compensation system that calculates a compensating flux needed to maintain the field at constant strength. The compensating flux is calculated from changes in sensed magnet temperature and a magnet temperature coefficient. One or more correction coils are wound around the magnet and driven with the current necessary to produce the compensating flux.

14 Claims, 4 Drawing figures